UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,172	08/18/2006	Ajit Y. Sane	36452US1	4064

116 7590 08/21/2008

PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER	
TRAN, BINH Q	
ART UNIT	PAPER NUMBER
3748	

MAIL DATE	DELIVERY MODE
08/21/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,172	SANE ET AL.	
	Examiner	Art Unit	
	BINH Q. TRAN	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-23,25 and 27-29* is/are rejected.

7)☒ Claim(s) *24 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the amendment filed April 23, 2008.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, 6, 10-11, 13-23, 25, and 27-29 are rejected under 35 U.S.C. 102 (b) as being anticipated by Haselkorn et al. (Haselkorn) (Patent Number 6,161,379).

Regarding claims 1-4, 27, Haselkorn discloses an exhaust manifold (8) comprising a ceramic inner layer (e.g. 10, 12) defining an exhaust gas passageway (Figure 1), a composite insulation zone disposed exterior to and adjacent said inner layer (e.g. 6, 24), an outer structural

layer (e.g. 16) disposed exterior to said composite insulation zone, and a strain isolation layer (e.g. 10, 12) disposed between said composite insulation zone and said outer structural layer, said composite insulation zone comprising at least one metallic foil layer (e.g. 10, 12) (e.g. See column 4, lines 4-21).

Regarding claims 6, 10-11, 13-23, 25, and 28-29, Haselkorn further discloses wherein the manifold (8) having a main tube portion and at least one runner extending from said main tube portion with an inlet port located at a terminal end of the runner, wherein the layers and the composite insulation zone described in claim 1 are provided in the main tube portion of the manifold, the runner comprising a ceramic inner layer (e.g. 10, 12) that is substantially encased within and spaced apart from a metallic outer layer thereof, said ceramic inner layer defining an exhaust gas passageway therein for conducting exhaust gas from said inlet port toward and into said main tube portion of said manifold, wherein a sealing gasket (e.g. 2, 14) is disposed and compressed between said ceramic inner and metallic outer layers of the runner at or adjacent the terminal end thereof, said sealing gasket being shielded by the metallic outer layer; a strain isolation layer (e.g. 10, 12) disposed between said composite insulation zone and said outer structural layer; wherein said strain isolation layer being an intumescent mat (e.g. See column 3, lines 40-67; column 4, lines 1-67; column 5, lines 1-40).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7-9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haselkorn in view of design choice.

Regarding claims 7-9, and 12, Haselkorn discloses all the claimed limitation as discussed above except that the specific properties of the intumescent mat comprising, by weight, 20-60 percent ceramic fibers, and 35-75 percent expandable material.

Regarding the specific range of the amount of ceramic fibers and the expandable material, it is the examiner's position that a range from about 20-60 percent ceramic fibers, and 35-75 percent expandable material of the intumescent mat, would have been an obvious matter of design choice well within the level of ordinary skill in the art, depending on variables such as the size of the engine, as well as mass flow rate and temperature of the exhaust gas, the properties of materials for making the intumescent mat, and the controlled temperature of the exhaust gas manifold. Moreover, there is nothing in the record, which establishes that the claimed parameters present a novel or unexpected result (See In re Kuhle, 562 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

Under some circumstances, however, changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. In re Dreyfus, 22 CCPA (Patents) 830, 73 F.2d 931, 24 USPQ 52; In re Waite et al., 35 CCPA (Patents) 1117, 168 F.2d 104, 77 USPQ 586. Such ranges are termed "critical" ranges, and the applicant has the burden of proving such criticality. In re Swenson et al., 30 CCPA (Patents) 809, 132 F.2d 1020, 56 USPQ 372; In re Scherl, 33 CCPA (Patents) 1193, 156 F.2d 72, 70 USPQ 204. However, even though

applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. In re Sola, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; In re Normann et al., 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; In re Irmscher, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

Allowable Subject Matter

Claims 24 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since allowable subject matter has been indicated, applicant is encouraged to submit ***Final Formal Drawings (If Needed)*** in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Response to Arguments

Applicant's arguments filed April 23, 2008 have been fully considered but they are not completely persuasive. Claims 1-4, and 6-29 are pending.

Applicant's cooperation in explaining the claims subject matter more specific to overcome the claim rejection is appreciated.

Applicant's arguments with respect to claims 1-4, and 6-29 have been considered but are moot in view of the new ground(s) of rejection as discussed above.

Applicants have argued that Haselkorn does not teach or suggest Applicant's claimed invention. More specifically, Applicants assert that the reference to Haselkorn fails to disclose *a strain isolation layer disposed between said composite insulation zone and said outer structural layer*. The examiner respectfully disagrees, in column 3, lines 56-67; and column 4, lines 1-10,

Haselkorn has clearly disclosed that "*The **insulating elements 10, 12 are quilted and have a ceramic fiber 26 encased within fiberglass 28**. The ceramic **fiber 26 of the insulating elements 10, 12 is one of alumino-silicate**, mineral wool and refractory ceramic fibers, preferably alumino-silicate, and more preferably substantially shot free alumino-silicate. The insulating elements can be contained in a **metal foil** to aid in assembly. Referring to FIG. 3, quilting of the fiberglass 28 defines separate pockets 30, 31 of ceramic fiber 26. The pockets 30, 31 have pocket dimensions in the range of about 12.7 mm length to about 254.0 mm in length and about 12.7 mm in width to about 254.0 mm in width. Preferably the dimensions of the pockets 30, 31 are about 25.4 mm length and about 25.4 mm width. **Each insulating element 10, 12 is quilted and has a ceramic fiber 26 encased within fiberglass 28**. The ceramic fiber 26 of the insulating element 10 is one of alumino-silicate, mineral wool and refractory ceramic fibers, preferably alumino-silicate, and more preferably substantially shot free alumino-silicate. **The insulating elements 10, 12 can be contained in a metal foil to aid in assembly**. The fiberglass 28 of the insulating element of this invention is preferably fiberglass cloth and more preferably is bidirectional fiberglass cloth as is well known in the art* ". It is clearly that Haselkorn has disclosed *a strain isolation layer disposed between said composite insulation zone and said outer structural layer*.

In addition, applicants have also argued that Haselkorn fail to disclose *"the strain isolation layer is used to absorb or dampen vibrational stresses to accommodate the unmatched thermal expansion characteristics of the claimed outer layer and the claimed composite insulation zone"*. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., ***"to absorb or dampen***

vibrational stresses to accommodate the unmatched thermal expansion characteristics of the claimed outer layer and the claimed composite insulation zone.") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Moreover, the ***insulating element 10 and 12, in*** Haselkorn, ***is quilted and has a ceramic fiber 26 encased within fiberglass 28, and contained in a metal foil*** would have been obvious inherently capable of performing the functional limitation as claimed in the disclose invention. (See In re Schreiber, 128 F.3d.1473, 44 USPQ2d 1429 (Fed. Cir. 1997)).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/BINH Q. TRAN/
Binh Q. Tran
Primary Examiner, Art Unit 3748
August 15, 2008